



## VA RR&D/HSR&D Center of Innovation on Disability and Rehabilitation Research (CINDRR)

### Fact Sheet

April 10, 2014

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- CINDRR is a multi-institutional research center at the North Florida/South Georgia Veterans Health System (Gainesville, FL) and the James A. Haley Veterans Hospital and Clinics (Tampa, FL). Scientists at this Veterans Health Administration Center of Innovation conduct research to develop strategies to improve—for Veterans of all ages—inpatient and outpatient rehabilitation services and long-term management of disability, including issues that impact family members.
- CINDRR focuses on three areas of research: (1) maximizing activity and community reintegration of Veterans with disabilities and their families, (2) advancing informatics and measurement science in rehabilitation, and (3) improving independence and quality of life through the use of technology.
- CINDRR is affiliated with the University of Florida (e.g., the Colleges of Medicine and of Public Health and Health Professions, Department of Biostatistics) and the University of South Florida (e.g., Colleges of Nursing and of Public Health, Department of Rehabilitation & Mental Health Counseling).
- CINDRR investigators partner with VA Geriatrics and Extended Care, Nursing, and Rehabilitation and Prosthetics Services; the Office of Rural Health; the VA Sunshine Healthcare Network (VISN 8); and the Geriatrics Research Education and Clinical Center in Gainesville. These partnerships ensure that our research is highly relevant to patient care and VA operations.
- Examples of newly funded research
  - *A study to address the high percentage of Veterans returning from Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) who were medically diagnosed with a mild traumatic brain injury (mTBI) and experience distressing symptoms.* “Smart phone” mobile applications have become a primary source of information and communication among a large percentage of Americans of the OEF/OIF/OND generation. The goal of the study is to evaluate the efficacy of a VA smart phone application called “TBI Coach” in improving clinical outcomes for Veterans with mTBI and determine what aspects of TBI Coach are most useful to these Veterans.
  - *A study to help bridge health and rehabilitation-related services from acute care and inpatient settings to Veterans' homes and communities to facilitate community reintegration (CR).* Focusing on Veterans with moderate to severe TBI, the goal of this study is to better understand the experiences of Veterans, their families, and their CR workers as the Veterans transition to and sustain community life. Anticipated impact on benefit to the VA healthcare system is comprehensive data on Veteran-perceived and environmental factors affecting CR that can be targeted for interventions to decrease barriers and strengthen facilitators for CR of these Veterans.
  - *A study to provide a cost-effective method of assessing Veterans' home safety.* Investigators will test the feasibility of partnering with caregivers to videotape Veterans' homes for subsequent professional evaluations of home safety to extend this service to a large number of Veterans for whom it is currently unavailable. In addition, barriers and facilitators to complying with professionally prescribed home-safety modifications will be investigated. This study will lead to a large-scale study of an intervention to increase Veterans' home-safety and to prevent falls.
  - *A study to assess the use of internet and telephone support by caregivers of Veterans with stroke.* The goal of this project is to implement caregiver programs that involve low-cost, evidence-based interventions that can be sustained in routine clinical practice. The immediate objective is to pilot test a problem-solving intervention that uses telephone support plus a nationally available website, *RESCUE*, to improve the quality of caregiving for and rehabilitation of Veterans.

- *A study to leverage the vast amounts of information in the VA electronic health record to identify factors that lead to the development of pressure ulcers in Veterans with spinal cord injury (SCI).* Information in progress notes is extracted using natural language processing. That information is combined with data from administrative sources (such as ICD-9-CM) to develop statistical models that will be compared to traditional risk assessment. If the new models are better than existing risk assessment, they will be implemented at VA SCI Centers nationally to facilitate early detection and treatment of pressure ulcers in this high-risk population.
- Examples of the impact of completed research
  - *Supported Employment.* A 2013 issue of *Research Currents* featured a story on a Tampa Veteran with SCI who, as a participant of a multi-site, national study coordinated in Tampa, successfully obtained a job with the help of the study intervention, supported employment. *Research Currents* is a national VA R&D publication distributed widely to VA stakeholders both within VA and without. Thus, this article will inform a wide variety of policy makers and clinicians that supported employment can increase quality of life of Veterans with SCI.  
<http://www.research.va.gov/currents/fall2013/fall2013-3.cfm>.
  - *Safe Patient Handling and Mobility (SPHM).* In 2013, the American Nurses Association released the *Safe Patient Handling and Mobility: Interprofessional National Standards*, which will greatly impact SPHM in all of healthcare. Of the 108 references cited, at least 16 are from the VA or had significant VA involvement, including seven from the Tampa VA, and six are from the VISN 8 Patient Safety Center of Inquiry. The VA is perceived by others throughout the country as a leader in making healthcare safer for nurses, nursing assistants, and others who move and transfer patients. <http://www.nursingworld.org/MainMenuCategories/WorkplaceSafety/Healthy-Work-Environment/SafePatient>
  - *Blast-Related Health Problems and Polytrauma.* A study of health outcomes associated with military deployment and traumatic injury suggested complex relationships between factors related to multiple deployments and overlapping, co-occurring, adverse physical and psychological health outcomes. Deployment-related experiences such as witnessing others being wounded or killed increased the risk for post-deployment adverse outcomes. Findings suggested that integrating physical and mental health care would benefit Veterans after deployment.
  - *Stroke Care.* As part of a VA Quality Enhancement Research Initiative, a study completed in 2012 at CINDRR-GNV, "Geographic Information System Analysis of Access to VA Acute Stroke Care," was selected by HSR&D as "Emerging Evidence in Cardiovascular Diseases." The study results are being used to support decision-making during the VA's implementation of requirements recommended for Secure Community Transition Facilities.  
[http://www.hsrd.research.va.gov/publications/emerging\\_evidence/cardiovascular-disease.cfm](http://www.hsrd.research.va.gov/publications/emerging_evidence/cardiovascular-disease.cfm)
  - *Impact of War on Puerto Rican Families.* A study found that OEF/OIF Veterans and family members were not prepared for changes they encountered post-deployment. The study also found that, despite these challenges, some Veterans and family members strengthened their relationships and renewed their appreciation for one another.
  - *Extracting Information for Text Electronic Health Record.* In support of research and clinical efforts, ongoing research is developing techniques to extract information from over 2 billion documents such as progress notes stored in the VA electronic health record system. Statistical text mining and natural language processing have been applied to clinical topics including fall-related injuries, post-traumatic stress disorder, SCI, and TBI. A paper on this work was presented at the 2012 Clinical Research Informatics Summit of the American Medical Informatics Association and received the Outstanding Poster Award. (*Extracting Semi-Structured Text Elements in Medical Progress Notes: A Machine Learning Approach*) <http://www.amia.org/amia-awards/annual-conference-awards>